

=> fil reg
FILE 'REGISTRY' ENTERED AT 16:18:51 ON 01 JUL 2010
USE IS SUBJECT TO THE TERMS OF YOUR STN CUSTOMER AGREEMENT.
PLEASE SEE "HELP USAGETERMS" FOR DETAILS.
COPYRIGHT (C) 2010 American Chemical Society (ACS)

Property values tagged with IC are from the ZIC/VINITI data file
provided by InfoChem.

STRUCTURE FILE UPDATES: 30 JUN 2010 HIGHEST RN 1228750-08-0
DICTIONARY FILE UPDATES: 30 JUN 2010 HIGHEST RN 1228750-08-0

New CAS Information Use Policies, enter HELP USAGETERMS for details.

TSCA INFORMATION NOW CURRENT THROUGH January 8, 2010.

Please note that search-term pricing does apply when
conducting SmartSELECT searches.

REGISTRY includes numerically searchable data for experimental and
predicted properties as well as tags indicating availability of
experimental property data in the original document. For information
on property searching in REGISTRY, refer to:

<http://www.cas.org/support/stngen/stndoc/properties.html>

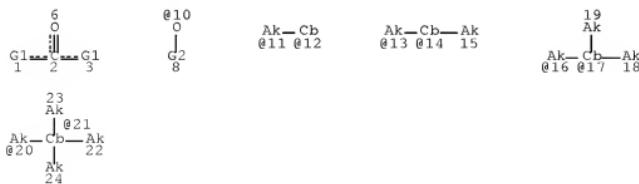
=> d sta que 134
L27 STR



VAR G1=3/7
NODE ATTRIBUTES:
DEFAULT MLEVEL IS ATOM
DEFAULT ECLEVEL IS UNLIMITED

GRAPH ATTRIBUTES:
RING(S) ARE ISOLATED OR EMBEDDED
NUMBER OF NODES IS 9

STEREO ATTRIBUTES: NONE
L29 260014 SEA FILE=REGISTRY SSS FUL L27
L30 STR



VAR G1=OH/10
 VAR G2=AK/CB/11/12/13/14/16/17/20/21
 NODE ATTRIBUTES:
 DEFAULT MLEVEL IS ATOM
 DEFAULT ECLEVEL IS UNLIMITED

GRAPH ATTRIBUTES:
 RING(S) ARE ISOLATED OR EMBEDDED
 NUMBER OF NODES IS 20

STEREO ATTRIBUTES: NONE
 L32 SCR 2127 OR 2043
 L34 3033 SEA FILE=REGISTRY SUB=L29 CSS FUL L30 NOT L32

100.0% PROCESSED 197919 ITERATIONS 3033 ANSWERS
 SEARCH TIME: 00.00.09

=> d sta que 150
 L27 STR



G1 9

VAR G1=3/7
 NODE ATTRIBUTES:
 DEFAULT MLEVEL IS ATOM
 DEFAULT ECLEVEL IS UNLIMITED

GRAPH ATTRIBUTES:
 RING(S) ARE ISOLATED OR EMBEDDED
 NUMBER OF NODES IS 9

STEREO ATTRIBUTES: NONE
 L29 260014 SEA FILE=REGISTRY SSS FUL L27
 L32 SCR 2127 OR 2043
 L37 STR

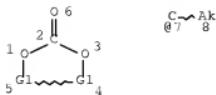


NODE ATTRIBUTES:
 DEFAULT MLEVEL IS ATOM
 DEFAULT ECLEVEL IS UNLIMITED

GRAPH ATTRIBUTES:
 RING(S) ARE ISOLATED OR EMBEDDED
 NUMBER OF NODES IS 4

STEREO ATTRIBUTES: NONE

L39 16585 SEA FILE=REGISTRY SUB=L29 SSS FUL L37 NOT L32
L40 1606 SEA FILE=REGISTRY SPE=ON ABB=ON PLU=ON L39 AND OCOC2/ES AND
1/NR
L48 STR



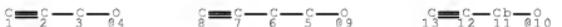
```
VAR G1=C/7  
NODE ATTRIBUTES:  
DEFAULT MLEVEL IS ATOM  
DEFAULT ECLEVEL IS UNLIMITED  
ECOUNT IS M1-X4 C AT 8
```

GRAPH ATTRIBUTES:
RSPEC 1
NUMBER OF NODES 1

STEREO ATTRIBUTES: NONE
L50 150 SEA FILE=REGISTRY SUB=L40 CSS FUL L48

100.0% PROCESSED 1606 ITERATIONS 150 ANSWERS
SEARCH TIME: 00.00.01

=> d sta que 176
L32 SCR 2127 OR 2043
L67 STR

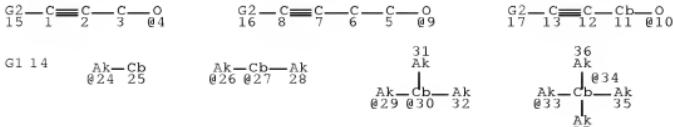


G1 14

```
VAR G1=4/9/10  
NODE ATTRIBUTES:  
DEFAULT MLEVEL IS ATOM  
DEFAULT ECLEVEL IS UNLIMITED
```

GRAPH ATTRIBUTES:
RING(S) ARE ISOLATED OR EMBEDDED
NUMBER OF NODES IS 14

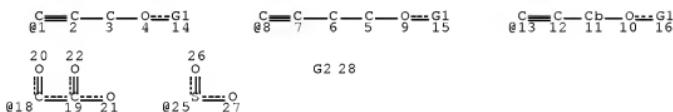
STEREO ATTRIBUTES: NONE
L70 394859 SEA FILE=REGISTRY SSS FUL L67 NOT L32
L71 STR



VAR G1=4/9/10
 VAR G2=H/AK/CB/24/26/26/27/29/30/33/34
 NODE ATTRIBUTES:
 CONNECT IS M1 RC AT 4
 CONNECT IS M1 RC AT 9
 CONNECT IS M1 RC AT 10
 DEFAULT MLEVEL IS ATOM
 DEFAULT ECLEVEL IS UNLIMITED

GRAPH ATTRIBUTES:
 RING(S) ARE ISOLATED OR EMBEDDED
 NUMBER OF NODES IS 31

STEREO ATTRIBUTES: NONE
 L73 161437 SEA FILE=REGISTRY SUB=L70 CSS FUL L71
 L74 STR



VAR G1=25/18
 VAR G2=1/8/13
 NODE ATTRIBUTES:
 DEFAULT MLEVEL IS ATOM
 DEFAULT ECLEVEL IS UNLIMITED

GRAPH ATTRIBUTES:
 RING(S) ARE ISOLATED OR EMBEDDED
 NUMBER OF NODES IS 25

STEREO ATTRIBUTES: NONE
 L76 173 SEA FILE=REGISTRY SUB=L73 SSS FUL L74

100.0% PROCESSED 161437 ITERATIONS 173 ANSWERS
 SEARCH TIME: 00.00.11

=> d 120 ide can

L20 ANSWER 1 OF 1 REGISTRY COPYRIGHT 2010 ACS on STN
 RN 71573-77-8 REGISTRY
 ED Entered STN: 16 Nov 1984
 CN Ethanedioic acid, 1,2-di-2-propynyl ester (CA INDEX NAME)
 OTHER CA INDEX NAMES:
 CN Ethanedioic acid, di-2-propynyl ester (9CI)
 CN Oxalic acid, di-2-propynyl ester (7CI)
 OTHER NAMES:
 CN Di-2-propynyl oxalate
 CN Dipropargyl oxalate
 MF C8 H6 O4
 CI COM
 LC STN Files: BEILSTEIN*, CA, CAPLUS, CASREACT, CHEMCATS, USPAT2, USPATFULL

(*File contains numerically searchable property data)



PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

18 REFERENCES IN FILE CA (1907 TO DATE)
 18 REFERENCES IN FILE CAPLUS (1907 TO DATE)

REFERENCE 1: 152:169798
 REFERENCE 2: 151:550721
 REFERENCE 3: 144:38333
 REFERENCE 4: 143:100421
 REFERENCE 5: 142:481987
 REFERENCE 6: 142:358035
 REFERENCE 7: 142:180441
 REFERENCE 8: 140:93542
 REFERENCE 9: 139:350847
 REFERENCE 10: 138:303922

=> fil hcplus
 FILE 'HCPLUS' ENTERED AT 16:19:42 ON 01 JUL 2010
 USE IS SUBJECT TO THE TERMS OF YOUR STN CUSTOMER AGREEMENT.
 PLEASE SEE "HELP USAGETERMS" FOR DETAILS.
 COPYRIGHT (C) 2010 AMERICAN CHEMICAL SOCIETY (ACS)

Copyright of the articles to which records in this database refer is held by the publishers listed in the PUBLISHER (PB) field (available for records published or updated in Chemical Abstracts after December 26, 1996), unless otherwise indicated in the original publications. The CA Lexicon is the copyrighted intellectual property of the American Chemical Society and is provided to assist you in searching databases on STN. Any dissemination, distribution, copying, or storing of this information, without the prior written consent of CAS, is strictly prohibited.

FILE COVERS 1907 - 1 Jul 2010 VOL 153 ISS 1
 FILE LAST UPDATED: 30 Jun 2010 (20100630/ED)
 REVISED CLASS FIELDS (/NCL) LAST RELOADED: Apr 2010
 USPTO MANUAL OF CLASSIFICATIONS THESAURUS ISSUE DATE: Apr 2010

HCplus now includes complete International Patent Classification (IPC) reclassification data for the second quarter of 2010.

CAS Information Use Policies apply and are available at:

<http://www.cas.org/legal/infopolicy.html>

This file contains CAS Registry Numbers for easy and accurate substance identification.

=> d 193 bib abs hitind hitstr retable tot

L93 ANSWER 1 OF 7 HCPLUS COPYRIGHT 2010 ACS on STN
AN 2007:284298 HCPLUS Full-text

DN 146:341031

TI Nonaqueous electrolyte solution and secondary lithium battery using the solution

IN Abe, Hiroshi; Takase, Manabu

PA Ube Industries, Ltd., Japan

SO Jpn. Kokai Tokkyo Koho, 22pp.

CODEN: JKXXAF

DT Patent

LA Japanese

FAN.CNT 1

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI JP 2007066864	A	20070315	JP 2005-335603	20051121
PRAI JP 2005-228467	A	20050805		
OS MARPAT 146:341031				

AB The electrolyte solution has an electrolyte salt dissolved on a nonaq. solvent; where the electrolyte solution further contains a specific structured ester compound having alkyleneoxy group, C-C triple bond, formyl group, haloalkyl group, etc. The battery has a cathode, an anode, and the above electrolyte solution.

IPCI H01M0010-40 [I,A]; H01M0010-36 [I,C*]; H01M0004-02 [I,A]

IPCR H01M0010-36 [I,C]; H01M0010-40 [I,A]; H01M0004-02 [I,C]; H01M0004-02 [I,A]

CC 52-2 (Electrochemical, Radiatational, and Thermal Energy Technology)

IT Battery electrolytes
(electrolyte solns. containing ester compds. with specific structures for secondary lithium batteries)

IT Secondary batteries
(lithium; electrolyte solns. containing ester compds. with specific structures for secondary lithium batteries)

IT 462-76-0 628-82-0, 2-Methoxy ethyl formate 120570-77-6, Diethylene glycol diformate, uses 153235-99-5 883984-18-7 929294-67-7 929294-68-8 929294-69-9 929294-70-2 929294-71-3 929294-72-4 929294-73-5 929294-74-6

RL: MOA (Modifier or additive use); USES (Uses)
(electrolyte solns. containing ester compds. with specific structures for secondary lithium batteries)

IT 96-49-1, Ethylene carbonate 616-38-6, Dimethyl carbonate 623-53-0, Methyl ethyl carbonate 872-36-6 , Vinylene carbonate 7782-42-5, Graphite, uses 14283-07-9, Lithium tetrafluoroborate 21324-40-3, Lithium hexafluorophosphate 346417-97-8, Cobalt lithium manganese nickel oxide (Co_{0.33}LiMn_{0.33}Ni_{0.33}O₂)

RL: TEM (Technical or engineered material use); USES (Uses)
(electrolyte solns. containing ester compds. with specific structures for secondary lithium batteries)

IT 929294-74-6

RL: MOA (Modifier or additive use); USES (Uses)
(electrolyte solns. containing ester compds. with specific structures for secondary lithium batteries)

RN 929294-74-6 HCPLUS

CN Sulfurous acid, 2-methoxyethyl 2-propyn-1-yl ester (CA INDEX NAME)



IT 96-49-1, Ethylene carbonate 616-38-6, Dimethyl carbonate 623-53-0, Methyl ethyl carbonate 872-36-6, Vinylene carbonate

RL: TEM (Technical or engineered material use); USES (Uses)
(electrolyte solns. containing ester compds. with specific structures for secondary lithium batteries)

RN 96-49-1 HCAPLUS

CN 1,3-Dioxolan-2-one (CA INDEX NAME)



RN 616-38-6 HCAPLUS

CN Carbonic acid, dimethyl ester (CA INDEX NAME)



RN 623-53-0 HCAPLUS

CN Carbonic acid, ethyl methyl ester (CA INDEX NAME)



RN 872-36-6 HCAPLUS

CN 1,3-Dioxol-2-one (CA INDEX NAME)



L93 ANSWER 2 OF 7 HCAPLUS COPYRIGHT 2010 ACS on STN

AN 2005:1292320 HCAPLUS [Full-text](#)

DN 144:38333

TI Nonaqueous electrolyte solution for secondary lithium battery

IN Abe, Koji; Miyoshi, Kazuniro; Kawata, Takaaki

PA Ube Industries, Ltd., Japan

SO PCT Int. Appl., 45 pp.

CODEN: PIXXD2

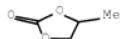
DT Patent
LA Japanese
FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	WO 2005117197	A1	20051208	WO 2005-JP9900	20050530
	W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KM, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NG, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SM, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW				
	RW: BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IS, IT, LT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG				
	CA 2568519	A1	20051208	CA 2005-2568519	20050530
EP	1772924	A1	20070411	EP 2005-743834	20050530
	R: AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IS, IT, LI, LT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR, AL, BA, HR, LV, MK, YU				
	CN 1989647	A	20070627	CN 2005-80024923	20050530
	CN 100474688	C	20090401		
	US 20070231707	A1	20071004	US 2006-597652	20061127
	US 7629085	B2	20091208		
	ZA 2006010287	A	20081029	ZA 2006-10287	20061208
	KR 2007024663	A	20070302	KR 2006-727547	20061228
	IN 2006CN04771	A	20070629	IN 2006-CN4771	20061228
PRAI	JP 2004-159283	A	20040528		
	WO 2005-JP9900	W	20050530		
OS	MARPAT 144:38333				
AB	The electrolyte solution contains an electrolyte salt in a nonaq. solvent and contains 0.01-10% S acid ester and 0.01-10% triple bond compound of the formula R1(C.tplbond.C)pR2, R3.C.tplbond.C(CR4R5)xYO1, Y2O(CR6R7)xC.tplbond.C(CR8R9)xY3, Y4O(CR10R11)xC.tplbond.CC.tplbond.C(CR12R13)xYO5, R14C.tplbond.C(CR15R16)xOCO2(CR17R18)xC.tplbond.CR19 or R20C.tplbond.C(CR21R22)xWOY6 where R1 = C1-12 alkyl, C3-6 cycloalkyl, or aryl group; R2-R22 = H or C1-12 alkyl, C3-6 cycloalkyl, or aryl groups, p = 1 or 2, x = 1 or 2; R4 and R5, R6 and R7, R8 and R9, R10 and R11, R12 and R13, R15 and R16, R17 and R18, and R21 and R22 may form C3-6 cycloalkyl groups; W = -SO-, -SO2-, -COCO-; and the Y's are carboxylate ester, alkyl carbonyl, or alkyl sulfonyl groups.				
IPCI	H01M0010-40 [ICM,7]; H01M0010-36 [ICM,7,C*]; H01M0004-02 [ICS,7]; H01M0004-38 [ICS,7]; H01M0004-58 [ICS,7]; H01M0004-66 [ICS,7]				
IPCR	H01M0004-02 [N,C*]; H01M0004-38 [I,C*]; H01M0004-38 [I,A]; H01M0004-58 [I,C*]; H01M0004-58 [N,A]; H01M0004-66 [I,C*]; H01M0004-66 [I,A]; H01M0010-36 [I,C*]; H01M0010-36 [I,A]				
CC	52-2 (Electrochemical, Radiational, and Thermal Energy Technology)				
IT	Battery electrolytes (sulfur acid ester and alkyne compound additives in nonaq. electrolyte solns. for secondary lithium batteries)				
IT	96-49-1, Ethylene carbonate 109-32-7, Propylene carbonate 623-53-0, Methyl ethyl carbonate 21324-40-3, Lithium hexafluorophosphate				
RL	DEV (Device component use); USES (Uses) (sulfur acid ester and alkyne compound additives in nonaq. electrolyte solns. for secondary lithium batteries)				

IT 536-74-3, Phenylacetylene 1072-53-3 1120-71-4, Propanesultone
 1633-83-6, Butanesultone 1899-25-8 3741-38-6, Glycol sulfite
 16156-58-4, 2-Propynyl methanesulfonate 19828-82-1
 19828-83-2 29619-56-5 61764-71-4 70886-56-5
 71573-77-8, Di(2-propynyl) oxalate 406725-07-3 530158-20-4
 870861-60-2
 RL: MOA (Modifier or additive use); USES (Uses)
 (sulfur acid ester and alkyne compound additives in nonaq. electrolyte
 solns. for secondary lithium batteries)
 IT 96-49-1, Ethylene carbonate 106-32-7, Propylene
 carbonate 623-53-0, Methyl ethyl carbonate
 RL: DEV (Device component use); USES (Uses)
 (sulfur acid ester and alkyne compound additives in nonaq. electrolyte
 solns. for secondary lithium batteries)
 RN 96-49-1 HCPLUS
 CN 1,3-Dioxolan-2-one (CA INDEX NAME)



RN 108-32-7 HCPLUS
 CN 1,3-Dioxolan-2-one, 4-methyl- (CA INDEX NAME)



RN 623-53-0 HCPLUS
 CN Carbonic acid, ethyl methyl ester (CA INDEX NAME)



IT 1899-25-8 19828-82-1 19828-83-2
 61764-71-4 71573-77-8, Di(2-propynyl) oxalate
 RL: MOA (Modifier or additive use); USES (Uses)
 (sulfur acid ester and alkyne compound additives in nonaq. electrolyte
 solns. for secondary lithium batteries)
 RN 1899-25-8 HCPLUS
 CN 2-Propyn-1-ol, sulfite (2:1) (8CI, 9CI) (CA INDEX NAME)



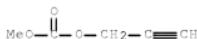
RN 19828-82-1 HCPLUS
 CN Sulfurous acid, methyl 2-propyn-1-yl ester (CA INDEX NAME)



RN 19828-83-2 HCPLUS
 CN Sulfurous acid, ethyl 2-propyn-1-yl ester (CA INDEX NAME)



RN 61764-71-4 HCPLUS
 CN Carbonic acid, methyl 2-propyn-1-yl ester (CA INDEX NAME)



RN 71573-77-8 HCPLUS
 CN Ethanedioic acid, 1,2-di-2-propyn-1-yl ester (CA INDEX NAME)



RETABLE

Referenced Author (RAU)	Year VOL PG	Referenced Work (R PY) (R VL) (R PG)	Referenced Work (R WK)	Referenced File
Denso Corp	2002	EP 1202373 A2	HCPLUS	
Denso Corp	2002	JP 2002134169 A	HCPLUS	
Denso Corp	2002	US 200276619 A1		
Mitsubishi Cable Indust	1994	JP 06-223875 A	HCPLUS	
Mitsubishi Electric Cor	2004	WO 0377350 A1		
Mitsubishi Electric Cor	2004	JP 2004265848 A	HCPLUS	
Mitsui Chemicals Inc	2003	JP 2003132946 A	HCPLUS	
Sanyo Electric Co Ltd	2005	JP 2005190754 A	HCPLUS	
Ube Industries Ltd	2000	JP 2000195545 A	HCPLUS	
Ube Industries Ltd	2002	JP 2002100399 A	HCPLUS	
Ube Industries Ltd	2002	JP 2002110234 A	HCPLUS	
Ube Industries Ltd	2002	JP 2002124297 A	HCPLUS	
Wilson Greatbatch Ltd	2002	EP 1213782 A2	HCPLUS	
Wilson Greatbatch Ltd	2002	JP 2002198092 A	HCPLUS	
Wilson Greatbatch Ltd	2002	CA 2353751 A	HCPLUS	
OSC.G 1	THERE ARE 1 CAPLUS RECORDS THAT CITE THIS RECORD (3 CITINGS)			

L93 ANSWER 3 OF 7 HCPLUS COPYRIGHT 2010 ACS on STN

AN 2005:606347 HCPLUS Full-text

DN 143:100421

TI Secondary lithium batteries having stable SEI (solid electrolyte interface)

IN Iwanaga, Masato; Inomata, Hideyuki; Oga, Keisuke; Abe, Hiroshi;

Hiyoshi, Kazuhiro
 PA Sanyo Electric Co., Ltd., Japan; Uba Industries, Ltd.
 SO Jpn. Kokai Tokkyo Koho, 13 pp.
 CODEN: JKXXAF

DT Patent
 LA Japanese
 FAN.CNT 1

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI JP 2005190754	A	20050714	JP 2003-428675	20031225
JP 4319025	B2	20090826		
WO 2005064735	A1	20050714	WO 2004-JP19328	20041224
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, US, UZ, VC, VN, YU, ZA, ZM, ZW RW: BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, T2, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IS, IT, LT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG				
CN 1890836	A	20070103	CN 2004-80035854	20041224
CN 100446335	C	20081224		
KR 2006113738	A	20061102	KR 2006-712347	20060621
US 20070178380	A1	20070802	US 2006-584266	20060623
JP 2009117383	A	20090528	JP 2009-17885	20090129
PRAI JP 2003-428675	A	20031225		
WO 2004-JP19328	W	20041224		

ASSIGNMENT HISTORY FOR US PATENT AVAILABLE IN LSUS DISPLAY FORMAT

- AB The batteries employ carbonaceous anodes, and nonaq. electrolyte solns. containing 0.1-3 weight% of vinylene carbonate and 0.1-2 weight% of di(2-propynyl) oxalate (to the total electrolyte solns.). The batteries show high initial discharge capacity, excellent charge-discharge cycling performance at high temperature, and inhibit gas generation upon repeated usage.
- IPCI H01M0010-36 [I,A]
 IPCR H01M0002-02 [I,C*]; H01M0002-02 [I,A]; H01M0004-02 [I,C*]; H01M0004-02 [I,A]; H01M0004-58 [I,C*]; H01M0004-58 [I,A]; H01M0010-36 [I,C*]; H01M0010-36 [N,A]; H01M0010-40 [I,A]
- CC 52-2 (Electrochemical, Radiational, and Thermal Energy Technology)
- IT Carbonaceous materials (technological products)
- RL: DEV (Device component use); USES (Uses)
 (anode; secondary Li battery containing carbonaceous anode and electrolyte solution containing gas-suppressing additives)
- IT Battery electrolytes
- Secondary batteries
 (secondary Li battery containing carbonaceous anode and electrolyte solution containing gas-suppressing additives)
- IT 872-36-6, Vinylene carbonate 71573-77-8,
- Di(2-propynyl) oxalate
- RL: DEV (Device component use); MOA (Modifier or additive use); USES (Uses)
 (additive for electrolyte solution; secondary Li battery containing carbonaceous anode and electrolyte solution containing gas-suppressing additives)
- IT 7782-42-5, Graphite, uses
- RL: DEV (Device component use); USES (Uses)
 (anode; secondary Li battery containing carbonaceous anode and electrolyte solution containing gas-suppressing additives)

IT 96-49-1, Ethylene carbonate 105-58-8, Diethyl carbonate 616-38-6, Dimethyl carbonate 623-53-0,
Ethyl methyl carbonate
RL: DEV (Device component use); USES (Uses)
(in electrolyte solution; secondary Li battery containing carbonaceous anode and electrolyte solution containing gas-suppressing additives)

IT 872-36-6, Vinylene carbonate 71573-77-8,
Di(2-propynyl) oxalate
RL: DEV (Device component use); MOA (Modifier or additive use); USES (Uses)
(additive for electrolyte solution; secondary Li battery containing carbonaceous anode and electrolyte solution containing gas-suppressing additives)

RN 872-36-6 HCPLUS
CN 1,3-Dioxol-2-one (CA INDEX NAME)



RN 71573-77-8 HCPLUS
CN Ethanedioic acid, 1,2-di-2-propyn-1-yl ester (CA INDEX NAME)



IT 96-49-1, Ethylene carbonate 105-58-8, Diethyl carbonate 616-38-6, Dimethyl carbonate 623-53-0,
Ethyl methyl carbonate
RL: DEV (Device component use); USES (Uses)
(in electrolyte solution; secondary Li battery containing carbonaceous anode and electrolyte solution containing gas-suppressing additives)

RN 96-49-1 HCPLUS
CN 1,3-Dioxolan-2-one (CA INDEX NAME)



RN 105-58-8 HCPLUS
CN Carbonic acid, diethyl ester (CA INDEX NAME)



RN 616-38-6 HCPLUS
CN Carbonic acid, dimethyl ester (CA INDEX NAME)



RN 623-53-0 HCAPLUS
 CN Carbonic acid, ethyl methyl ester (CA INDEX NAME)



OSC.G 2 THERE ARE 2 CAPLUS RECORDS THAT CITE THIS RECORD (2 CITINGS)

L93 ANSWER 4 OF 7 HCAPLUS COPYRIGHT 2010 ACS on STN

AN 2005:283755 HCAPLUS Full-text

DN 142:358035

TI Nonaqueous electrolyte solution and secondary lithium battery using the solution

IN Abe, Koji; Kuwata, Takasaki

PA Obe Industries, Ltd., Japan

SO PCT Int. Appl., 26 pp.

CODEN: PIXXD2

DT Patent

LA Japanese

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	WO 2005029631	A1	20050331	WO 2004-JP13687	20040917
	W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW				
	RW: BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG				
	EP 1672729	A1	20060621	EP 2004-773306	20040917
	R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR, BG, CZ, EE, HU, PL, SK, HR				
	CN 1864299	A	20061115	CN 2004-80026823	20040917
	CN 100481604	C	20090422		
	KR 2006076304	A	20060704	KR 2006-705312	20060316
	US 20070054185	A1	20070308	US 2006-572571	20060317
	US 7261975	B2	20070828		
PRAI	JP 2003-324100	A	20030917		
	WO 2004-JP13687	W	20040917		

ASSIGNMENT HISTORY FOR US PATENT AVAILABLE IN LSUS DISPLAY FORMAT

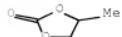
AB The electrolyte solution has an electrolyte salt dissolved in a nonaq. solvent; where the electrolyte solution further contains a perfluorophenoxy compound C6F5-OR1 (R1 = substituent selected from C2-12 alkyl carbonyl, C7-18 aryloxy carbonyl and/or C1-12 alkane sulfonyl group; and at least one H atom of the substituent may be substituted by a halogen

atom or an C6-18 aryl group) and a vinylene carbonate and/or 1,3-propane sulfone. The battery has a cathode, an anode, and the above electrolyte solution.

- IPCI H01M0010-40 [ICM,7]; H01M0010-36 [ICM,7,C*]
 IPCR C07C0309-00 [I,C*]; C07C0309-66 [I,A]; H01M0006-16 [N,C*]; H01M0006-16 [N,A]; H01M0010-36 [I,C*]; H01M0010-36 [N,A]
 CC 52-2 (Electrochemical, Radiational, and Thermal Energy Technology)
 IT Battery electrolytes
 (electrolyte solns. containing pentafluorophenoxy compds. for secondary lithium batteries)
 IT Secondary batteries
 (lithium; electrolyte solns. containing pentafluorophenoxy compds. for secondary lithium batteries)
 IT 96-49-1, Ethylene carbonate 108-32-7, Propylene carbonate 623-53-0, Methyl ethyl carbonate 7782-42-5, Graphite, uses 12057-17-9, Lithium manganese oxide (LiMn2O4) 12190-79-3, Cobalt lithium oxide (CoLiO2) 14283-07-9, Lithium tetrafluoroborate 21324-40-3, Lithium hexafluorophosphate RL: DEV (Device component use); USES (Uses)
 (electrolyte solns. containing pentafluorophenoxy compds. for secondary lithium batteries)
 IT 96-48-0 827-52-1, Cyclohexyl benzene 872-36-6, Vinylene carbonate 1120-71-4, 1,3-Propane sulfone 1717-84-6 2049-95-8, tert-Pentyl benzene 5129-37-3, Butyl pivalate 19220-93-0, Pentafluorophenyl acetate 36919-03-6, Methyl pentafluorophenyl carbonate 71573-77-8, Dipropargyl oxalate 161912-36-3
 RL: MOA (Modifier or additive use); USES (Uses)
 (electrolyte solns. containing pentafluorophenoxy compds. for secondary lithium batteries)
 IT 96-49-1, Ethylene carbonate 108-32-7, Propylene carbonate 623-53-0, Methyl ethyl carbonate RL: DEV (Device component use); USES (Uses)
 (electrolyte solns. containing pentafluorophenoxy compds. for secondary lithium batteries)
 RN 96-49-1 HCAPLUS
 CN 1,3-Dioxolan-2-one (CA INDEX NAME)



- RN 108-32-7 HCAPLUS
 CN 1,3-Dioxolan-2-one, 4-methyl- (CA INDEX NAME)



- RN 623-53-0 HCAPLUS
 CN Carbonic acid, ethyl methyl ester (CA INDEX NAME)



IT 872-36-6, Vinylene carbonate 71573-77-8, **Dipropargyl oxalate**
 RL: MOA (Modifier or additive use); USES (Uses)
 (electrolyte solns. containing pentafluorophenoxy compds. for secondary lithium batteries)
 RN 872-36-6 HCPLUS
 CN 1,3-Dioxol-2-one (CA INDEX NAME)



RN 71573-77-8 HCPLUS
 CN Ethanedioic acid, 1,2-di-2-propyn-1-yl ester (CA INDEX NAME)



RETABLE

Referenced Author (RAU)	Year (RPY)	VOL (RVL)	PG (RPG)	Referenced Work (RWK)	Referenced File
Mitsui Chemicals Inc	1999			JP 11-329496 A	HCPLUS
Sony Corp	1997			JP 09-050822 A	HCPLUS
Sony Corp	2000			JP 2000156243 A	HCPLUS
Toyota Central Research	2000			JP 2000323169 A	HCPLUS
Ube Industries Ltd	1999			JP 11-329490 A	HCPLUS
Ube Industries Ltd	2000			JP 2000003724 A	HCPLUS
Ube Industries Ltd	2000			US 6033809 A	HCPLUS
Ube Industries Ltd	2003			WO 03077351 A1	HCPLUS
Ube Industries Ltd	2003			JP 2003272700 A	HCPLUS
OSC.G 2 THERE ARE 2 CAPLUS RECORDS THAT CITE THIS RECORD (5 CITINGS)					

L93 ANSWER 5 OF 7 HCPLUS COPYRIGHT 2010 ACS on STN

AN 2005:76450 HCPLUS Full-text

DN 142:180441

TI Nonaqueous electrolyte solution for secondary lithium battery and the battery

IN Abe, Koji; Miyoshi, Kazuhiro; Kawata, Takaaki

PA Ube Industries, Ltd., Japan

SO PCT Int. Appl., 48 pp.

CODEN: PIXXD2

DT Patent

LA Japanese

FAN.CNT 1

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI WO 2005008829	A1	20050127	WO 2004-JP10194	20040716
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY,				

TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW RW: BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG	CA 2532579 A1 20050127 CA 2004-2532579 20040716
EP 1650826 R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR, BG, CZ, EE, HU, PL, SK, HR	EP 20060426 EP 2004-747660 20040716
CN 1853307 A 20061025 CN 2004-80026556 20040716	CN 100517853 C 20090722
ZA 2006000431 A 20070425 ZA 2006-431 20060116	IN 2006CN00200 A 20070629 IN 2006-CN200 20060116
IN 2006CN00200 A1 20090109	IN 225889 A1 20090109
KR 2006035767 A 20060426 KR 2006-701080 20060117	US 20060177742 A1 20060810 US 2006-564852 20060117
IN 2007CN04612 A 20080328 IN 2007-CN4612 20071016	IN 2007CN04612 A 20080328 IN 2007-CN4612 20071016
PRAI JP 2003-198421 A 20030717	JP 2003-383403 A 20031113
JP 2003-383403 A 20031113	WO 2004-JP10194 W 20040716
IN 2006-CN200 A3 20060116	IN 2006-CN200 A3 20060116

ASSIGNMENT HISTORY FOR US PATENT AVAILABLE IN LSUS DISPLAY FORMAT

OS MARPAT 142:180441

GI

* STRUCTURE DIAGRAM TOO LARGE FOR DISPLAY - AVAILABLE VIA OFFLINE PRINT *

AB The electrolyte solution contains 0.01-10% vinyl carbonate compound I (R₁ and R₂ = H or C₁-4 alkyl groups) and 0.01-10% alkyne compds. selected from II-VII (R's and Y's defined; and x and p = 1 or 2).

IPCI H01M0010-40 [ICM,7]; H01M0010-36 [ICM,7,C*]; H01M0004-02 [ICS,7];
H01M0004-58 [ICS,7]

IPC8 H01M0004-04 [N,C*]; H01M0004-50 [N,C*]; H01M0004-50 [N,A]; H01M0004-52 [N,C*]; H01M0004-52 [N,A]; H01M0004-58 [N,C*]; H01M0004-58 [N,A];
H01M0010-36 [I,C*]; H01M0010-36 [I,A]; H01M0010-42 [N,C*]; H01M0010-42 [N,A]

CC 52-2 (Electrochemical, Radiational, and Thermal Energy Technology)

IT Battery electrolytes

(electrolyte solns. containing vinyl carbonate derivs. and alkyne compds.
for secondary lithium batteries)

IT 96-49-1, Ethylene carbonate 108-32-7, Propylene
carbonate 623-53-0, Ethyl methyl carbonate 21324-40-3,
Lithium hexafluorophosphate 90076-65-6

RL: DEV (Device component use); USES (Uses)

(electrolyte solns. containing vinyl carbonate derivs. and alkyne compds.
for secondary lithium batteries)

IT 98-06-6, tert-Butylbenzene 452-10-8, 2,4-Difluoroanisole 462-06-6,
Fluorobenzene 536-74-3, Phenylacetylene 827-52-1, Cyclohexylbenzene
871-36-6, Vinylene carbonate 1072-53-3, Ethylene sulfate
1120-71-4, 1,3-Propanesultone 1717-84-6 2049-95-8, tert-Amylbenzene
16156-58-4, 2-Propynyl methanesulfonate 32042-39-0 36677-73-3
61764-71-4 71573-77-8, Di(2-propynyl) oxalate

79493-91-7, Dipropargyl carbonate 131166-79-5

197244-15-8 347396-84-3 406725-07-3 833427-83-1

RL: MOA (Modifier or additive use); USES (Uses)

(electrolyte solns. containing vinyl carbonate derivs. and alkyne compds.

for secondary lithium batteries)

IT 96-49-1, Ethylene carbonate 108-32-7, Propylene carbonate 623-53-0, Ethyl methyl carbonate

RL: DEV (Device component use); USES (Uses)

(electrolyte solns. containing vinyl carbonate derivs. and alkyne compds.
for secondary lithium batteries)

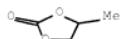
RN 96-49-1 HCPLUS

CN 1,3-Dioxolan-2-one (CA INDEX NAME)



RN 108-32-7 HCPLUS

CN 1,3-Dioxolan-2-one, 4-methyl- (CA INDEX NAME)



RN 623-53-0 HCPLUS

CN Carbonic acid, ethyl methyl ester (CA INDEX NAME)



IT 872-36-6, Vinylene carbonate 61764-71-4

71573-77-8, Di(2-propynyl) oxalate 79493-91-7,

Dipropargyl carbonate 131166-79-5 347396-84-3

RL: MOA (Modifier or additive use); USES (Uses)

(electrolyte solns. containing vinyl carbonate derivs. and alkyne compds.
for secondary lithium batteries)

RN 872-36-6 HCPLUS

CN 1,3-Dioxol-2-one (CA INDEX NAME)



RN 61764-71-4 HCPLUS

CN Carbonic acid, methyl 2-propyn-1-yl ester (CA INDEX NAME)



RN 71573-77-8 HCPLUS

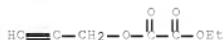
CN Ethanedioic acid, 1,2-di-2-propyn-1-yl ester (CA INDEX NAME)



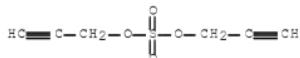
RN 79493-91-7 HCPLUS
 CN 2-Propyn-1-ol, 1,1'-carbonate (CA INDEX NAME)



RN 131166-79-5 HCPLUS
 CN Ethanedioic acid, 1-ethyl 2-(2-propyn-1-yl) ester (CA INDEX NAME)



RN 347396-84-3 HCPLUS
 CN 2-Propyn-1-ol, sulfate (2:1) (9CI) (CA INDEX NAME)



RETABLE

Referenced Author (RAU)	Year (R PY)	VOL (R VL)	PG (R PG)	Referenced Work (R WK)	Referenced File (R CAPLUS)
Matsushita Electric Ind	2003		JP 2003142075 A	HCPLUS	
Mitsubishi Chemical Cor	2004		JP 2004265848 A	HCPLUS	
Mitsui Chemicals Inc	2002		JP 2002343426 A	HCPLUS	
Ube Industries Ltd	2000		JP 2000195545 A	HCPLUS	
Ube Industries Ltd	2001		CN 1277468 A	HCPLUS	
Ube Industries Ltd	2001		JP 2001043895 A	HCPLUS	
Ube Industries Ltd	2002		JP 2002124297 A	HCPLUS	
Ube Industries Ltd	2003		JP 2003059529 A	HCPLUS	

L93 ANSWER 6 OF 7 HCPLUS COPYRIGHT 2010 ACS on STN

AN 2002:313468 HCPLUS Full-text

DN 136:343311

TI Nonaqueous electrolyte solution and secondary lithium battery using the electrolyte solution

IN Hamamoto, Shunichi; Abe, Hiroshi; Yuguchi, Motoshi; Ushikoshi, Yoshihiro; Matsumori, Yasuo

PA Uba Industries, Ltd., Japan

SO Jpn. Kokai Tokkyo Koho, 9 pp.

CODEN: JKXXAF

DT Patent
LA Japanese
FAN.CNT 1

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI JP 2002124297	A	20020426	JP 2000-313549	20001013
JP 3823712	B2	20060920		
PRAI JP 2000-313549		20001013		
OS MARPAT 136:343311				

AB The electrolyte solution contains ≥1 alkynyl compound R1C.tplbond.C(CR2R3)nOXOY, where X = -SO₂-, -SO₂-, or -COCO-; Y = C1-12 alkyl, alkenyl, alkynyl group, C3-6 cycloalkyl group, C6-12 aryl group, or C7-12 aralkyl group; R1-3 = C1-12 alkyl, alkenyl, alkynyl group, C3-6 cycloalkyl group, C6-12 aryl group, or C7-12 aralkyl group, R2 and R3 may join together forming a C3-6 cycloalkyl group, and n = 1 or 2.

IPC1 H01M0010-40 [I,A]; H01M0010-36 [I,C*]

IPCR H01M0010-36 [I,C*]; H01M0010-40 [I,A]

CC 52-2 (Electrochemical, Radiation, and Thermal Energy Technology)

IT Battery electrolytes

(nonaq. electrolyte solns. containing alkynyl compds. for secondary lithium batteries)

IT 96-49-1, Ethylene carbonate 105-58-8, Diethyl carbonate 108-32-7, Propylene carbonate 616-38-6, Dimethyl carbonate 21324-40-3, Lithium hexafluorophosphate

RL: DEV (Device component use); USES (Uses)

(nonaq. electrolyte solns. containing alkynyl compds. for secondary lithium batteries)

IT 1899-25-8 19826-82-1 71573-77-8,

Di-(2-propynyl) oxalate 417706-29-7 417706-30-0

RL: MOA (Modifier or additive use); USES (Uses)

(nonaq. electrolyte solns. containing alkynyl compds. for secondary lithium batteries)

IT 96-49-1, Ethylene carbonate 105-58-8, Diethyl carbonate 108-32-7, Propylene carbonate 616-38-6, Dimethyl carbonate

RL: DEV (Device component use); USES (Uses)

(nonaq. electrolyte solns. containing alkynyl compds. for secondary lithium batteries)

RN 96-49-1 HCPLUS

CN 1,3-Dioxolan-2-one (CA INDEX NAME)



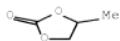
RN 105-58-8 HCPLUS

CN Carbonic acid, diethyl ester (CA INDEX NAME)



RN 108-32-7 HCPLUS

CN 1,3-Dioxolan-2-one, 4-methyl- (CA INDEX NAME)



RN 616-38-6 HCPLUS
 CN Carbonic acid, dimethyl ester (CA INDEX NAME)



IT 1899-25-8 19828-82-1 71573-77-8,
Di-(2-propynyl) oxalate
 RL: MOA (Modifier or additive use); USES (Uses)
 (nonaq. electrolyte solns. containing alkynyl compds. for secondary lithium
 batteries)
 RN 1899-25-8 HCPLUS
 CN 2-Propyn-1-ol, sulfite (2:1) (8CI, 9CI) (CA INDEX NAME)



RN 19828-82-1 HCPLUS
 CN Sulfurous acid, methyl 2-propyn-1-yl ester (CA INDEX NAME)



RN 71573-77-8 HCPLUS
 CN Ethanedioic acid, 1,2-di-2-propyn-1-yl ester (CA INDEX NAME)



OSC.G 4 THERE ARE 4 CAPLUS RECORDS THAT CITE THIS RECORD (4 CITINGS)

L93 ANSWER 7 OF 7 HCPLUS COPYRIGHT 2010 ACS on STN
 AN 2001:489871 HCPLUS Full-text
 DN 135:79494
 TI Alkali metal battery activated with a nonaqueous electrolyte
 having a sulfate additive
 IN Gan, Hong; Takeuchi, Esther S.
 PA Wilson Greatbatch Ltd., USA
 SO U.S. Pat. Appl. Publ., 7 pp., Cont.-in-part of U.S. 6,180,283.
 CODEN: USXXCO
 DT Patent

LA English

FAN.CNT 6

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI US 20010006751	A1	20010705	US 2001-772680	20010130
US 6444360	B2	20020903		
US 6013394	A	20000111	US 1998-9557	19980120
US 6180283	B1	20010130	US 1999-460035	19991213
PRAI US 1998-9557	A2	19980120		
US 1999-460035	A2	19991213		

ASSIGNMENT HISTORY FOR US PATENT AVAILABLE IN LSUS DISPLAY FORMAT

OS MARPAT 135:79494

AB An alkali metal, solid cathode, nonaq. electrochem. cell capable of delivering high current pulses, rapidly recovering its open circuit voltage and having high current capacity, is disclosed. The stated benefits are realized by the addition of at least one organic sulfate additive to an electrolyte comprising an alkali metal salt dissolved in a mixture of a low viscosity solvent and a high permittivity solvent. A preferred solvent mixture includes propylene carbonate, 1,2-dimethoxyethane and a sulfate additive having at least one unsatd. hydrocarbon containing a C(sp or sp₂)-C(sp₃) bond unit having the C(sp₃) carbon directly connected to the -OSO₃- functional group.

INCL 429340000

IPCI H01M0010-40 [ICM]; H01M0010-36 [ICM,C*]

IPCR H01M0006-16 [N,C*]; H01M0006-16 [N,A]; H01M0010-36 [I,C*]; H01M0010-40 [I,A]

NCL 429/340.000; 429/231.200; 429/231.950; 429/332.000; 429/333.000;
429/334.000; 429/335.000; 429/215.000; 429/205.000; 429/219.000;
429/220.000; 429/231.500; 429/325.000; 429/328.000; 429/330.000

CC 52-2 (Electrochemical, Radiational, and Thermal Energy Technology)

IT Battery electrolytes

(alkali metal battery activated with nonaq. electrolyte
having sulfate additive)

IT Carbon black, uses

Fluoropolymers, uses

RL: MOA (Modifier or additive use); USES (Uses)
(alkali metal battery activated with nonaq. electrolyte
having sulfate additive)

IT 67-68-5, Dmso, uses 68-12-2, Dmf, uses 75-05-8, Acetonitrile, uses 79-20-9, Methyl acetate 96-48-0, γ-Butyrolactone 96-49-1, Ethylene carbonate 105-58-8, Diethyl carbonate 108-20-3, Diisopropyl ether 108-29-2, γ-Valerolactone 108-32-7, Propylene carbonate 109-99-9, Thf, uses 110-71-4, 1,2-Dimethoxyethane 111-96-6, Diglyme 112-49-2, Triglyme 127-19-5, Dimethyl acetamide 143-24-8, Tetraglyme 556-65-0, Lithium thiocyanate 616-38-6, Dimethyl carbonate 623-53-0, Ethyl methyl carbonate 623-96-1, Dipropyl carbonate 629-14-1, 1,2-Diethoxyethane 872-50-4, uses 2923-17-3 2923-20-8 4437-85-8, Butylene carbonate 5137-45-1, 1-Ethoxy-2-methoxyethane 7439-93-2, Lithium, uses 7791-03-9, Lithium perchlorate 11099-11-9, Vanadium oxide 11105-02-5, Silver vanadium oxide 12057-24-8, Lithia, uses 12789-09-2, Copper vanadium oxide 12798-95-7 13453-75-3, Lithium fluorosulfate 14024-11-4, Lithium tetrachloroaluminate 14283-07-9, Lithium tetrafluoroborate 14485-20-2, Lithium tetraphenylborate 15955-98-3, Lithium tetrachlorogallate 18424-17-4, Lithium hexafluoroantimonate 21324-40-3, Lithium hexafluorophosphate 29935-35-1, Lithium hexafluoroarsenate 33454-82-9, Lithium triflate 35363-40-7, Ethyl propyl carbonate 56125-42-9, Methyl propyl carbonate 90076-65-6 132404-42-3 135023-75-5, Lithium phenylsulfate 181183-66-4, Copper silver vanadium oxide

RL: DEV (Device component use); USES (Uses)

(alkali metal battery activated with nonaq. electrolyte having sulfate additive)

IT 7440-44-0, Carbon, uses 7782-42-5, Graphite, uses 18495-74-4, Dibenzyl sulfate 27063-40-7 347396-84-3 347396-86-5
RL: MOA (Modifier or additive use); USES (Uses)
(alkali metal battery activated with nonaq. electrolyte having sulfate additive)

IT 7440-02-0, Nickel, uses 7440-32-6, Titanium, uses 12597-68-1, stainless steel, uses
RL: MOA (Modifier or additive use); USES (Uses)
(powder; alkali metal battery activated with nonaq. electrolyte having sulfate additive)

IT 96-49-1, Ethylene carbonate 105-58-8, Diethyl carbonate 108-32-7, Propylene carbonate 616-38-6,
Dimethyl carbonate 623-53-0, Ethyl methyl carbonate 623-96-1, Dipropyl carbonate 4437-85-8, Butylene carbonate 35363-40-7, Ethyl propyl carbonate 56525-42-9, Methyl propyl carbonate
RL: DEV (Device component use); USES (Uses)
(alkali metal battery activated with nonaq. electrolyte having sulfate additive)

RN 96-49-1 HCPLUS

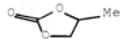
CN 1,3-Dioxolan-2-one (CA INDEX NAME)



RN 105-58-8 HCPLUS
CN Carbonic acid, diethyl ester (CA INDEX NAME)



RN 108-32-7 HCPLUS
CN 1,3-Dioxolan-2-one, 4-methyl- (CA INDEX NAME)



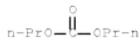
RN 616-38-6 HCPLUS
CN Carbonic acid, dimethyl ester (CA INDEX NAME)



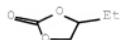
RN 623-53-0 HCPLUS
CN Carbonic acid, ethyl methyl ester (CA INDEX NAME)



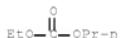
RN 623-96-1 HCAPLUS
 CN Carbonic acid, dipropyl ester (CA INDEX NAME)



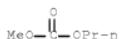
RN 4437-85-8 HCAPLUS
 CN 1,3-Dioxolan-2-one, 4-ethyl- (CA INDEX NAME)



RN 35363-40-7 HCAPLUS
 CN Carbonic acid, ethyl propyl ester (CA INDEX NAME)



RN 56525-42-9 HCAPLUS
 CN Carbonic acid, methyl propyl ester (CA INDEX NAME)



IT 347396-34-3
 RL: MOA (Modifier or additive use); USES (Uses)
 (alkali metal battery activated with nonaq. electrolyte
 having sulfate additive)
 RN 347396-84-3 HCAPLUS
 CN 2-Propyn-1-ol, sulfate (2:1) (9CI) (CA INDEX NAME)



=> d his

(FILE 'HOME' ENTERED AT 15:42:03 ON 01 JUL 2010)
SET COST OFF

FILE 'HCAPLUS' ENTERED AT 15:42:21 ON 01 JUL 2010

	E ABE/AU
L1	4 S E3
	E ABE K/AU
L2	1873 S E3
	E ABE KO/AU
L3	766 S E3,E4,E20
	E KOJI/AU
L4	3 S E3,E4
	E KO JI/AU
	E KO/AU
L5	2 S E3
	E KO J/AU
L6	61 S E3
	E KO JI/AU
	E MIYOSHI/AU
L7	2 S E3
	E MIYOSHI K/AU
L8	151 S E3
L9	31 S E31
	E KAZUHIRO/AU
	E KAZU/AU
	E KUWATA/AU
L10	2 S E3
	E KUWATA T/AU
L11	100 S E3,E5
	E TAKAAKI/AU
L12	2 S E3
	E TAKA AKI/AU
	E TAKAKI/AU
L13	1 S E3
	E TAKAKI K/AU
L14	80 S E3
	E UBE/CO
	E UBE?/CO,PA,CS
	E UBE I/CO
L15	10646 S E4-E35/CO,PA,CS
	E E29+ALL
L16	11623 S E2+RT OR E2-E33/PA,CS
L17	20449 S UBE?/CO,PA,CS
L18	1 S US20060177742/PN OR (US2006-564852 OR WO2004-JP10194 OR JP200 SEL RN

FILE 'REGISTRY' ENTERED AT 15:47:34 ON 01 JUL 2010

L19	26 S E1-E26
L20	1 S L19 AND C8H604
L21	2 S 96-49-1 OR 108-32-7
L22	1 S 872-36-6
L23	1 S L19 AND C6H604S
L24	1 S L19 AND C7H804
L25	21 S L19 NOT L21-L24
L26	3 S L25 AND (C7H603 OR C4H803 OR C5H603)
L27	STR

L28 50 S L27
L29 260014 S L27 FUL
L30 STR
L31 50 S L30 CSS SAM SUB=L29
L32 SCR 2127 OR 2043
L33 5 S L30 NOT L32 CSS SAM SUB=L29
L34 3033 S L30 NOT L32 CSS FUL SUB=L29
 SAV TEMP L34 LAURA564A/A
L35 2853 S L34 NOT IDS/CI
L36 2853 S L26,L35
L37 STR
L38 50 S L37 NOT L32 SAM SUB=L29
L39 16585 S L37 NOT L32 FUL SUB=L29
 SAV TEMP L39 LAURA564B/A
L40 1606 S L39 AND OCOC2/ES AND 1/NR
L41 938 S L40 AND 3/ELC.SUB
L42 295 S L41 AND 3/O
L43 261 S L42 NOT ((D OR T)/ELS OR ION OR LABELED OR 11C# OR 12C# OR 13
L44 249 S L43 NOT (BR OR CL OR F OR I) /ELS
L45 204 S L44 AND 3-11/C
L46 STR
L47 10 S L46 CSS SAM SUB=L40
L48 STR L46
L49 8 S L48 CSS SAM SUB=L40
L50 150 S L48 CSS FUL SUB=L40
L51 111 S L50 AND L43
 SAV TEMP L51 LAURA564C/A
L52 111 S L21,L22,L51

FILE 'HCAPLUS' ENTERED AT 16:05:32 ON 01 JUL 2010

L53 55056 S L36
L54 22474 S L52
L55 8050 S L53 AND L54
L56 4537 S L55 AND H01M/IPC, IC, ICM, ICS, EPC
L57 6489 S L55 AND BATTERY
 E BATTERY/CT
L58 73059 S E4+OLD,NT OR E5+OLD,NT OR E6+OLD,NT OR E7+OLD,NT
 E E8+ALL
L59 12958 S E2+OLD,NT OR E3+OLD,NT OR E4+OLD,NT
 E BATTERIES/CT
 E E3+ALL
L60 177442 S E1 OR E2+OLD,NT OR E3+OLD,NT OR E4+OLD,NT OR E5+OLD,NT
L61 6327 S L55 AND L58-L60
L62 6591 S L56,L57,L61
L63 1417 S L62 AND PY<=2006 NOT P/DT
L64 3222 S L62 AND (PD<=20060117 OR PRD<=20060117 OR AD<=20060117) NOT L
L65 148 S L1-L18 AND L62
L66 4660 S L63-L65

FILE 'REGISTRY' ENTERED AT 16:07:56 ON 01 JUL 2010

L67 STR
L68 50 S L67 SAM
L69 50 S L67 NOT L32 SAM
L70 394859 S L67 NOT L32 FUL
L71 STR L67
L72 50 S L71 CSS SAM SUB=L70
L73 161437 S L71 CSS FUL SUB=L70
L74 STR L67
L75 1 S L74 SAM SUB=L73
L76 173 S L74 FUL SUB=L73

SAV TEMP L76 LAURA564D/A
L77 148 S L76 NOT (N OR P OR SI OR B)/ELS
L78 135 S L77 NOT (BR OR CL OR F OR I)/ELS
L79 131 S L78 AND 1/S
L80 4 S L78 NOT L79
L81 3 S L80 NOT CCS/CI
L82 4 S L20,L23,L24,L81
L83 130 S L79 NOT L82

FILE 'HCAPLUS' ENTERED AT 16:17:08 ON 01 JUL 2010
L84 21 S L82
L85 917 S L83
L86 6 S L66 AND L84
L87 3 S L66 AND L85
L88 6 S L53,L54 AND L84
L89 6 S L53,L54 AND L85
L90 10 S L86-L89
L91 6 S L1-L18 AND L84,L85
L92 10 S L90,L91
L93 7 S L92 NOT E1-E9

FILE 'REGISTRY' ENTERED AT 16:18:51 ON 01 JUL 2010

FILE 'HCAPLUS' ENTERED AT 16:19:42 ON 01 JUL 2010

=>